

REMARKS

This Amendment is submitted in response to the Office Action mailed November 8, 2004. Claims 1-8 remain pending in the application. Claims 1-3 and 6-8 stand rejected. Claims 4 and 5 were objected to for depending from rejected base claims. Claims 1, 4, 5 and 7 have been amended herein. Applicants submit that the pending claims are in complete condition for allowance and respectfully request reconsideration in view of the following remarks.

Objections to the Specification

The Specification was objected to for various informalities. The Specification has been amended, as suggested by the Examiner. Accordingly, Applicants respectfully request that the objections to the Specification be withdrawn.

Objections to the Claims

Claim 7 has been amended herein to depend from claim 5, as suggested by the Examiner. Accordingly, Applicants respectfully request that the objection to claim 7 be withdrawn.

Claims Rejected under 35 U.S.C. §103

Claims 1-3 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over a Nordson Application Bulletin titled "Cotton Swab Manufacturing" (hereinafter "the NAB") in view of U.S. Patent No. 4,943,451 to Zimmer. Claim 1 is the

only independent claim of this rejected group and, as amended, is directed to a method of applying adhesive to at least a first end of a rod-shaped member having a longitudinal axis, comprising:

conveying the rod shaped member in a machine direction with the longitudinal axis thereof extending transverse to the machine direction,

applying adhesive to the first end from a first discharge passage located proximate a first adhesive application surface,

rotating the rod shaped member about the longitudinal axis thereof while conveying the rod shaped member, and

maintaining contact between the rotating first end and the first adhesive application surface downstream of the first discharge passage while conveying the rod shaped member to distribute the discharged adhesive around the first end.

Applicants respectfully traverse the rejection of claim 1 because there is no teaching or suggestion to modify the apparatus disclosed in the NAB as asserted by the Examiner. Applicants further traverse the rejection of claim 1 because, even if the NAB and Zimmer were combined, the combination does not teach or suggest the claimed invention.

The NAB is directed to an apparatus for manufacturing cotton swabs. The apparatus uses upwardly oriented slot nozzles to coat the ends of slender paperboard or plastic sticks with adhesive. Upwardly extruded adhesive ribbons dispensed from the slot nozzles envelop the perimeters of the sticks to coat their entire end surfaces. Thereafter, cotton fibers are applied to the adhesive coated ends of the sticks to form the swabs.

Zimmer is directed to an application device 1 for coating sheet-like materials that are fed in a machine direction past a slot-shaped opening 9. The apparatus includes an application surface 11b extending downstream from the opening. As a substrate is moved past the opening, coating material is dispensed to the substrate from the opening. The substrate and coating material are then moved beneath the application surface 11b where the coating material forms a layer on the substrate. The entire apparatus "floats" on the layer of coating material that is present between the substrate and the downstream surface 11b to evenly distribute the coating material across the entire width of the sheet material 14. Zimmer, at col. 5, lines 60-68, states:

In the case of coating applications, or applications which are partially coating and partially impregnating, the device 1 begins to float on the substance layer present between the applicator surface 11b and the sheet material 14, the substance layer having a wedgelike shape, whereby the substance layer is evenly distributed over the sheet material 14 and a clearance corresponding to the thickness of the substance is formed in the area 19.

The Examiner alleges that it would have been obvious to modify the slot nozzles of the NAB to include application surfaces extending downstream from discharge passages of the slot nozzles "to provide an evenly distributed coating" on the sticks of the NAB. (Office Action at page 4, lines 6-8.) However, there is no teaching or suggestion in the art that the system disclosed in the NAB is deficient or requires improvement in this regard. As shown in the NAB, adhesive is applied around the entire circumference of the sticks. This is achieved by the slot nozzles disclosed in the NAB when the line speeds and spinning rates of the sticks are properly adjusted. (See Application at page 3, lines 10-22.) In fact, nothing in the references of record teaches

or suggests that the application device of Zimmer, which is suited to coating sheet-like substrates, would provide an adhesive coating on the rod shaped sticks of the NAB that is more evenly distributed than the coating already provided by the apparatus of the NAB. Moreover, modifying the system disclosed in the NAB in view of Zimmer's actual teachings would require a wholesale reconstruction of the NAB so that the applicator device would "float" on the adhesive layer. While this may be practical to accomplish when conveying a sheet of material, it would not be practical when conveying a rod shaped member or stick that presumably would only have line contact with such an applicator surface so as to enable movement along the required machine or conveying direction as shown by the NAB. For at least these reasons, Applicants assert that there is no teaching or suggestion to modify the slot nozzles of the NAB as asserted in the Office Action. Because nothing in the references of record teaches or suggests the desirability of modifying the NAB in view of Zimmer, the motivation to do so can only be the result of improper hindsight analysis using Applicants' own disclosure.

Zimmer also fails to cure the deficiencies of the NAB with respect to claim

1. For example, the NAB does not teach or suggest "conveying the rod shaped member in a machine direction with the longitudinal axis thereof extending transverse to the machine direction" while "maintaining contact between the rotating first end and the first adhesive application surface downstream of the first discharge passage," as recited in claim 1. Stated differently, the NAB does not teach or suggest translating a rod shaped member (i.e. translation of the longitudinal axis, or rotational center) relative to an application surface that is downstream from a first discharge passage. Zimmer

discloses that "the substrate can have a curved, roll like shape, with the roll shape rotating beneath the nozzle," as noted by the Examiner. (Office Action at page 3, last paragraph.) However, while the "roll like shape" may in a sense rotate beneath the application surface, Zimmer fails to teach or suggest that the "roll like shape" is conveyed or translated relative to the application surface. Rather, the location of the rotational center of the "roll like shape" (see, e.g., axis 17 in FIG. 1 of Zimmer) remains fixed. In this regard, the apparatus of Zimmer is configured for coating sheet-like materials that are fed past the slot-shaped opening in a continuous manner, while the general contour of the shape that the sheet-like material conforms to is fixed in position. This is a required aspect of Zimmer's teachings in order to achieve the uniform distribution of coating material on the sheet-like material. If the position of this shape was not fixed, the substrate would not be kept pressed against the applicator surface to "float" the applicator, and Zimmer's device would not achieve its intended purpose of providing a uniform coating of material on the sheet-like material. In summary, Zimmer, at most, teaches rotating a curved, flat sheet material with a fixed axis of rotation along an applicator surface. Zimmer does not teach rotating a rod shaped member about its axis while conveying the rod shaped member along an application surface. Only Applicants' disclosure contains such a teaching. Picking and choosing elements from the prior art based on such hindsight analysis is improper, as is a rationale that is based on whether one of ordinary skill could have made the proposed modification. Here, the actual teachings contained in Zimmer and the NAB do not lead one of ordinary skill to

the claimed invention absent the teachings of Applicants' own disclosure. Therefore, the rejection of claim 1 should be withdrawn.

Claims 2, 3 and 8 each depend from independent claim 1, and are therefore in condition for allowance for at least the reasons stated above for claim 1. Applicants further traverse the rejection of at least claim 3 because Zimmer fails to teach or suggest "grooves in the first adhesive application surface extending in the machine direction," as recited in claim 3. Rather, Zimmer only discloses axial (transverse to the machine direction) or diagonal grooves. (See, e.g., Zimmer at column 12, lines 10-13.) For at least these reasons, Applicants respectfully request that the rejections of claims 2, 3 and 8 be withdrawn.

Claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of the NAB and Zimmer, in further view of the asserted state of the prior art set forth in the Office Action. Claim 7 has been amended herein to depend from claim 5, and is therefore in condition for allowance for at least the reasons set forth below with respect to claim 5. Claim 6 depends from independent claim 1, and is therefore in condition for allowance for at least the reasons stated above for claim 1. Accordingly, Applicants respectfully request that the rejections of claims 6 and 7 be withdrawn.

Allowable Subject Matter

Claims 4 and 5 were objected to for depending from a rejected base claim, but were indicated to be allowable if rewritten in independent form. Claims 4 and 5

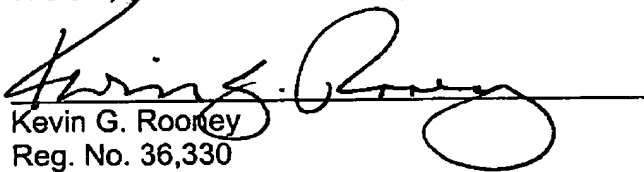
have been rewritten in independent form herein. Accordingly, Applicants respectfully request that the objection to claims 4 and 5 be withdrawn.

The application is now in complete condition for allowance. If the Examiner believes any matter requires further discussion, the Examiner is respectfully invited to telephone the undersigned attorney so that the matter may be promptly resolved.

Applicants do not believe that any fees are due in connection with this response. However, if such petition is due or any fees are necessary, the Commissioner may consider this to be a request for such and charge any necessary fees to deposit account 23-3000.

Respectfully submitted,

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